

WHAT IS CLAIMED IS:

1. A trailer coupling arrangement for a motor vehicle including a trailer coupling, a coupling ball and a ball neck, said coupling arrangement comprising:

a drive motor for moving the trailer coupling from an operating position into a resting position and the reverse; and

a control unit for operating the drive motor wherein the drive motor actuates motion of the trailer coupling only when each of a velocity of the vehicle does not exceed a predetermined value, one of a tailgate and a rear window of the motor vehicle are open, and no trailer is fastened on the trailer coupling.

2. The trailer coupling arrangement according to Claim 1, wherein conditions for implementation of the motion of the trailer coupling are AND-connected and wherein motion of the trailer coupling is stopped if one of the conditions of the motion of the trailer coupling fails.

3. The trailer coupling arrangement according to Claim 1, wherein a sensor unit in a closing mechanism recognizes an open rear window or tailgate.

4. The trailer coupling arrangement according to Claim 1, wherein a

sensor is provided on the coupling head or on the electric socket for connecting the trailer with the motor vehicle for recognizing whether a trailer is mounted on the coupling.

5. The trailer coupling arrangement according to Claim 1, wherein motion of the trailer coupling is prevented or stopped when torque of the drive motor exceeds a specified reference value.

6. A trailer coupling system for motor vehicles comprising:
a trailer coupling including a coupling ball and a ball neck;
drive means for moving said trailer coupling from a first position to a second position, and from said second position to said first position;
a first control means for controlling actuation of said drive means when each of a velocity of said motor vehicle does not exceed a predetermined value, and one of a tailgate and a rear window of the motor vehicle are open and no trailer is fastened on the trailer coupling;

a second control means for stopping said drive motor when either the velocity of the vehicle exceeds said predetermined value, when the tailgate and the rear window of the motor vehicle are closed or when a trailer is fastened on the trailer coupling.

7. The trailer coupling arrangement according to Claim 1, wherein said predetermined value is 5Km/h.

8. The trailer coupling arrangement according to Claim 6, wherein said predetermined value is 5Km/h.

9. The trailer apparatus according to Claim 6, wherein said first control unit is a logic AND gate.

10. The trailer apparatus according to Claim 6, wherein said second control unit is a logic OR gate.

11. The trailer arrangement coupling according to Claim 6, wherein a sensor unit in a closing mechanism recognizes an open rear window or tailgate.

12. The trailer arrangement coupling according to Claim 6, wherein a sensor is provided on the coupling head or on the electric socket for connecting the trailer with the motor vehicle for recognizing whether a trailer is mounted on the coupling.

the trailer with the motor vehicle for recognizing whether a trailer is mounted on the coupling.

13. The trailer coupling arrangement according to Claim 6, wherein motion of the trailer coupling is prevented or stopped when torque of the drive motor exceeds a specified reference value.